

### IN THE CLAIMS:

Please amend the claims as follows. The following listing of claims will replace all prior versions, and listings, of claims in the application.

1-30. (Canceled)

31. (Currently Amended) A system comprising:

one or more processors; and

memory storing program instructions;

wherein the program instructions are executable by the one or more processors to:

store a replica of a data object, wherein the replica includes a plurality of data portions;

store respective history information for each respective data portion of the plurality of data portions of the replica, wherein the respective history information for each respective data portion of the replica indicates ~~indicative of~~ previous accesses to the respective data portion of the replica; ~~of the data object;~~

receive a write request specifying particular data to write to a particular data portion of the replica of the data object;

in response to the write request:

analyze the respective history information for the particular data portion of the replica of the data object to determine whether the particular data portion was accessed more than a threshold number of times within a particular time period;

select to either: 1) write the particular data specified by the write request to the particular data portion of the replica of the data object in order to update the particular data portion if the particular data portion was accessed more than the threshold number of times within the particular time period, or to 2) mark the particular data portion of the replica as stale without marking other data portions of the plurality of data portions of the replica as stale if the particular data portion was not accessed more than the threshold number of times within the particular time period.

~~in response to the write request, select to either: 1) write the particular data specified by the write request to the replica of the data object in order to update the data object, or to 2) mark the replica of the data object as stale;~~

~~wherein the selection of either writing the particular data to the replica of the data object or marking the replica of the data object as stale is made depending upon the history information.~~

32-35. (Canceled)

36. (Previously Presented) The system of claim 31,  
wherein the replica of the data object comprises a replica of a file.

37. (Currently Amended) A computer-readable storage medium storing program instructions executable to:

store a replica of a data object, wherein the replica includes a plurality of data portions;

store respective history information for each respective data portion of the plurality of data portions of the replica, wherein the respective history information for each respective data portion of the replica indicates ~~indicative of~~ previous accesses to the respective data portion of the replica; ~~of the data object;~~

receive a write request specifying particular data to write to a particular data portion of the replica of the data object;

in response to the write request:

analyze the respective history information for the particular data portion of the replica of the data object to determine whether the particular data portion was accessed more than a threshold number of times within a particular time period;

select to either: 1) write the particular data specified by the write request to the particular data portion of the replica of the data object in order to update the particular data portion if the particular data portion was accessed more than the threshold number of times within the particular time period, or to 2) mark the particular data portion of the replica as stale without marking other data portions of the plurality of data portions of the replica as stale if the particular data portion was not accessed more than the threshold number of times within the particular time period.

~~in response to the write request, select to either: 1) write the particular data specified by the write request to the replica of the data object in order to update the data object, or to 2) mark the replica of the data object as stale;~~

~~wherein the selection of either writing the particular data to the replica of the data object or marking the replica of the data object as stale is made depending upon the history information.~~

38-41. (Canceled)

42. (Previously Presented) The computer-readable storage medium of claim 37, wherein the replica of the data object comprises a replica of a file.

43. (Currently Amended) A computer-implemented method comprising:  
storing a replica of a data object in a computer system, wherein the replica includes a plurality of data portions;

storing respective history information in the computer system for each respective data portion of the plurality of data portions of the replica, wherein the respective history information for each respective data portion of the replica indicates ~~indicative of~~ previous accesses to the respective data portion of the replica; ~~of the data object;~~

receiving a write request specifying particular data to write to a particular data portion of the replica of the data object;

in response to the write request:

analyzing the respective history information for the particular data portion of the replica of the data object to determine whether the particular data portion was accessed more than a threshold number of times within a particular time period;

selecting to either: 1) write the particular data specified by the write request to the particular data portion of the replica of the data object in order to update the particular data portion if the particular data portion was accessed more than the threshold number of times within the particular time period, or to 2) mark the particular data portion of the replica as stale without marking other data portions of the plurality of data portions of the replica as stale if the particular data portion was not accessed more than the threshold number of times within the particular time period.

~~in response to the write request, selecting to either: 1) write the particular data specified by the write request to the replica of the data object in order to update the data object, or to 2) mark the replica of the data object as stale;~~

~~wherein the selection of either writing the particular data to the replica of the data object or marking the replica of the data object as stale is made depending upon the history information.~~

44-47. (Canceled)

48. (Previously Presented) The method of claim 43,  
wherein the replica of the data object comprises a replica of a file.

49. (New) The system of claim 31,  
wherein the write request is a first write request;  
wherein the particular data portion is a first data portion of the plurality of data portions of the replica of the data object;  
wherein the particular time period is a first particular time period;  
wherein the program instructions are further executable by the one or more processors to:  
    receive a second write request specifying data to write to a second data portion of the replica of the data object;  
    in response to the second write request:  
        analyze the respective history information for the second data portion of the replica of the data object to determine whether the second data portion was accessed more than the threshold number of times within a second particular time period;  
        select to either: 1) write the data specified by the second write request to the second data portion of the replica of the data object in order to update the second data portion if the second data portion was accessed more than the threshold number of times within the second particular time period, or to 2) mark the second data portion of the replica as stale without marking other data portions of the plurality of data portions of the replica as stale if the second data portion was not accessed more than the threshold number of times within the second particular time period.

50. (New) The system of claim 31,

wherein the program instructions are executable by the one or more processors to store the respective history information for each respective data portion of the plurality of data portions of the replica by storing a respective list of previous accesses to each respective data portion of the plurality of data portions of the replica;

wherein the program instructions are executable by the one or more processors to analyze the respective history information for the particular data portion of the replica by analyzing the respective list of previous accesses to the particular data portion of the replica.

51. (New) The system of claim 31,

wherein the program instructions are executable by the one or more processors to store the respective history information for each respective data portion of the plurality of data portions of the replica by storing respective numerical information for each respective data portion indicating previous accesses to the respective data portion;

wherein the program instructions are executable by the one or more processors to analyze the respective history information for the particular data portion of the replica by analyzing the respective numerical information for the particular data portion.

52. (New) The computer-readable storage medium of claim 37,

wherein the write request is a first write request;

wherein the particular data portion is a first data portion of the plurality of data portions of the replica of the data object;

wherein the particular time period is a first particular time period;

wherein the program instructions are further executable to:

receive a second write request specifying data to write to a second data portion of the replica of the data object;

in response to the second write request:

analyze the respective history information for the second data portion of the replica of the data object to determine whether the second data portion was accessed more than the threshold number of times within a second particular time period;

select to either: 1) write the data specified by the second write request to the second data portion of the replica of the data object in order to update the second data portion if the second data portion was accessed more than the threshold number of times within the second particular time period, or to 2) mark the second data portion of the replica as stale without marking other data portions of the plurality of data portions of the replica as stale if the second data portion was not accessed more than the threshold number of times within the second particular time period.

53. (New) The computer-readable storage medium of claim 37,  
wherein the program instructions are executable to store the respective history information for each respective data portion of the plurality of data portions of the replica by storing a respective list of previous accesses to each respective data portion of the plurality of data portions of the replica;

wherein the program instructions are executable to analyze the respective history information for the particular data portion of the replica by analyzing the respective list of previous accesses to the particular data portion of the replica.

54. (New) The computer-readable storage medium of claim 37,  
wherein the program instructions are executable to store the respective history information for each respective data portion of the plurality of data portions of the replica by storing respective numerical information for each respective data portion indicating previous accesses to the respective data portion;

wherein the program instructions are executable to analyze the respective history information for the particular data portion of the replica by analyzing the respective numerical information for the particular data portion.

55. (New) The method of claim 43,  
wherein the write request is a first write request;  
wherein the particular data portion is a first data portion of the plurality of data portions of the replica of the data object;  
wherein the particular time period is a first particular time period;

wherein the method further comprises:

receiving a second write request specifying data to write to a second data portion of the replica of the data object;

in response to the second write request:

analyzing the respective history information for the second data portion of the replica of the data object to determine whether the second data portion was accessed more than the threshold number of times within a second particular time period;

selecting to either: 1) write the data specified by the second write request to the second data portion of the replica of the data object in order to update the second data portion if the second data portion was accessed more than the threshold number of times within the second particular time period, or to 2) mark the second data portion of the replica as stale without marking other data portions of the plurality of data portions of the replica as stale if the second data portion was not accessed more than the threshold number of times within the second particular time period.

56. (New) The method of claim 43,

wherein storing the respective history information for each respective data portion of the plurality of data portions of the replica comprises storing a respective list of previous accesses to each respective data portion of the plurality of data portions of the replica;

wherein analyzing the respective history information for the particular data portion of the replica comprises analyzing the respective list of previous accesses to the particular data portion of the replica.

57. (New) The method of claim 43,

wherein storing the respective history information for each respective data portion of the plurality of data portions of the replica comprises storing respective numerical information for each respective data portion indicating previous accesses to the respective data portion;

wherein analyzing the respective history information for the particular data portion of the replica comprises analyzing the respective numerical information for the particular data portion.